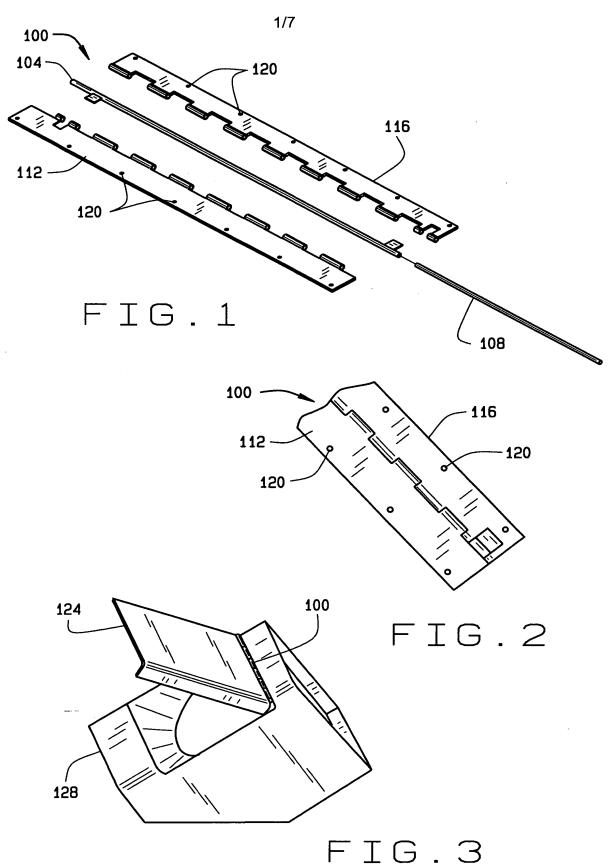
Title: HINGE APPARATUS WITH TWO-WAY CONTROLLABLE SHAPE MEMORY ALLOY (SMA) HINGE PIN ACTUATOR AND METHODS OF MAKING TWO-WAY SMA PARTS

Inventor: James H. Mabe Atty. Ref.: 7784-000704 Attorney Anthony G. Fussner (314) 726-7500



2/7

DISPLACEMENT (degrees)

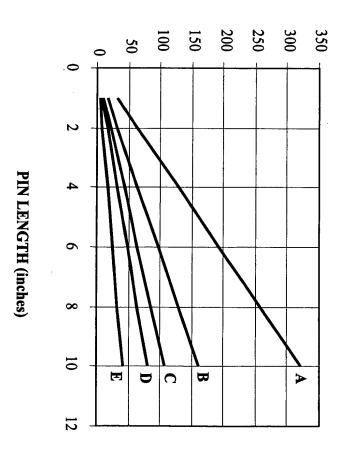
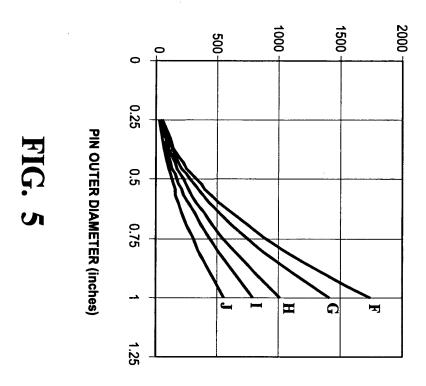


FIG. 4

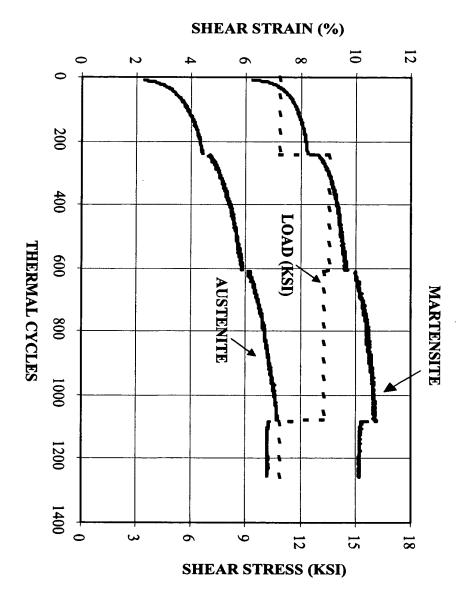
3/7

TORQUE (inches * pounds)

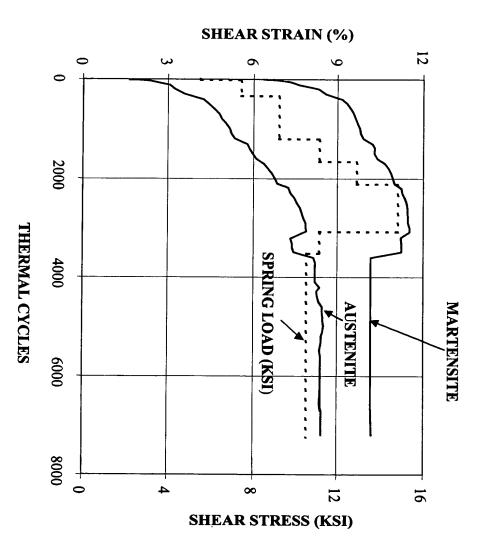


4/7





5/7



1G. 7

6/7

DYNAMIC SHEAR STRAIN (%)

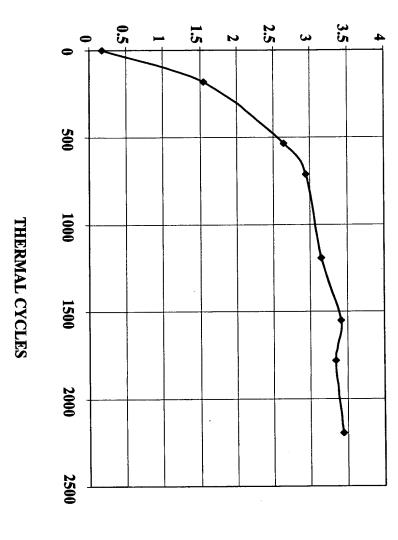


FIG. 8

7/7

SHEAR STRESS (KSI)

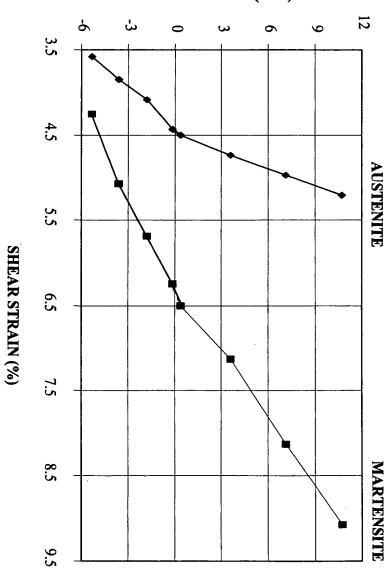


FIG. 9